

ABSTRACT OF THE DISCLOSURE

METHOD AND SYSTEM FOR POWER MANAGEMENT INCLUDING LOCAL BOUNDING
OF DEVICE GROUP POWER CONSUMPTION

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A method and system for power management including local bounding of device group power consumption provides the responsiveness of local power control while meeting global system power consumption and power dissipation limits. At the system level, a global power bound is determined and divided among groups of devices in the system so that local bounds are determined that meet the global system bound. The local bounds are communicated to device controllers associated with each group of devices and the device controllers control the power management states of the associated devices in the group to meet the local bound. Thus, by action of all of the device controllers, the global bound is met. The controllers may be memory controllers and the devices memory modules, or the devices may be other devices within a processing system having associated local controllers. Alternatively or in concert, the devices may be entire processing systems and the associated controller a power management controller for associated processing systems, whereby multiple processing locales may be power-managed consistent with a global power consumption budget.